

## Chapter 10 Written Project

For each hypothesis test use the standard 5-step procedure. Two of the tests will fail their conditions, forcing you to use the alternative test:

- one-proportion (binomial)
- one-mean (sign test)

1) Here are 10 randomly selected blood sugar levels from a laboratory. (Levels measured after a 12-hour fast in mg/DL.)

105    89    96    135    94    91    111    107    141    83

Use the data to test the claim that the mean blood sugar level is 100 mg/DL using the 0.05 level of significance.

2) A sample of 35 non-smokers revealed that 31 of them showed traces of a chemical that appears in the blood of people exposed to second-hand smoke. At the 0.05 level of significance test the claim that more than 80% of non-smokers are exposed to second-hand smoke.

3) A magazine article claims that more than 30% of college students own an iPhone. A random sample of 200 college students revealed that 72 of them own an iPhone. Test the magazine's claim at the 0.05 level of significance.

4) Eight artichoke plants at a farm were selected at random. Here are the number of artichokes produced by each plant last year.

38    32    17    51    40    36    34    39

At the 0.05 level of significance, test the claim that the mean number of artichokes is higher than 30 artichokes.